

REMARKS

Reconsideration and allowance of this application are respectfully requested in view of the foregoing amendments and the following explanations and remarks.

In paragraphs 3, 4 and 5 of the Office Action, the Examiner noted the use of a trademark in the specification and pointed out that it should be accompanied by its generic terminology wherever it appears. Claims 5 and 8 were rejected under 35 U.S.C. 112, second paragraph as being indefinite because the trademark was improperly used to identify the material or product.

The specification and claims 5 and 8 have been amended to properly identify the material or product by its generic terminology wherever it appears, and to accompany the trademark with an identification of the source. Therefore, it is respectfully submitted that the specification and claims, as now amended, are sufficient to comply with the statute.

Applicants' agent would like to next discuss the allowable subject matter noted at page 7, paragraph 15, of the office action, and then the rejection of the claims under 35 U.S.C. 102 and 103 based on the cited references.

In paragraph 15 of the Office Action, claims 10-13 were objected to as being dependent upon a rejected base claim but were deemed to be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The Examiner indicated that the prior art does not teach or suggest that in addition to graphite particles and specific corrosion inhibitor, an aromatic solvent is involved in the process of on-line cleaning gas turbine surfaces.

Claim 10 has been rewritten in independent form including all of the limitations of the base claim and intervening claim 5. Amended claim 10 should now be an allowable base claim, and dependent claims 11, 12 and 13 now depend from an allowable base claims and should be allowed along with amended claim 10.

In paragraphs 7 and 8 of the Office Action, 8 claims 1, 2 and 5 were rejected under 35 U.S.C. 102(b) as being anticipated by GB 839762. In paragraph 12 of the Office Action, claim 8 was rejected under 35 U.S.C. 103(a) as being unpatentable over GB'762 in view of Cheng et al (U.S. 4,163,728). In paragraph 13 of the Office Action, claim 9 was rejected under 35 U.S.C. 103(a) as being unpatentable over GB'762.

Claims 2, 5 and 8 have been canceled, and the limitations thereof are now in amended base claim 1. Base claim 1, as amended, further limits the corrosion inhibitor to LMG-30E, and also includes the limitation of an aromatic solvent, which was deemed to be allowable as indicated by the examiner in his discussion of claim 10.

Further discussion of the rejection of amended base claim 1 under 35 U.S.C. 102 and 103 based on the cited GB'762 and Cheng references is believed to be moot, since amended base claim 1 now contains subject matter deemed to be allowable and should now be an allowable base claim. Dependent claim 9 contains all the limitations of base claim 1 and recites further limitations of the percentage ranges of the particles and corrosion inhibitor, and should be allowable along with amended base claim 1.

In paragraph 14 of the Office Action, claim 3 was rejected under 35 U.S.C. 103(a) as being unpatentable over GB'762 as evidenced by Potier (U.S. 3,934,637). Claim 3 has been rewritten in independent form. The Examiner took the position that since Potier teaches that expandable graphite will, on heating, usually to temperatures in excess of 150° C, expand to many times its original volume, it would have been obvious to employ expandable graphite in GB'762.

Applicant's agent does not agree, and submits that the Potier reference is "non-analogous", and is outside of the field of applicants' endeavor and is not pertinent to the particular problem with which the applicants are concerned.

Potier is in the field of casting molten metals to form ingots, and merely teaches the use of a bonded composition that includes expandable graphite in combination with a fluxing agent and a binder. The particular problem stated to be solved by Portier is the problem encountered when bottom-pouring or filling an ingot mould with molten metal either by from the base. Namely, overcoming the tendency for the surface of the molten metal to oxidize in contact with air and to form an oxide skin thereon; and during solidification, to prevent the tendency of the ingot to weld itself to the mould walls, and to prevent damage to the mould walls and/or defects in the ingot surface during subsequent stripping from the mould. The reference teaches the use of expanded graphite in a different structure, for a different purpose, and under different conditions.

MPEP 2141.01(a) states that: "In order to rely on a reference as a basis for rejection of an applicant's invention, the reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the inventor was concerned." In re Oetiker, 977 F.2d 1443, 1446, 24 USPQ2d 1443, 1445 (Fed. Cir. 1992). See also In re Deminski, 796 F.2d 436, 230 USPQ 313 (Fed. Cir. 1986); In re Clay, 966 F.2d 656, 659, 23 USPQ2d 1058, 1060-61 (Fed. Cir. 1992) ("A reference is reasonably pertinent if, even though it may be in a different field from that of the inventor's endeavor, it is one which, because of the matter with which it deals, logically would have commended itself to an inventor's attention in considering his problem.").

The field of applicants' endeavor is in the field of gas turbine cleaning methods and compositions, and more particularly to a method for on-line cleaning of the internal surfaces of a gas turbine. There is nothing contained in Potier that is reasonably pertinent to gas turbines, turbine cleaning methods or turbine cleaning compositions; nor is there anything in Potier relevant to the particular problem of on-line cleaning of the internal surfaces of a gas turbine during operation without significant loss of turbine power.

Clearly, a person of ordinary skill, seeking to solve the problem of cleaning gas turbines would not reasonably be expected or motivated to look to the field of casting molten metals to form ingots.

It is submitted that Potier is non-analogous art because it is not from the field of the inventors' endeavor and because it is not reasonably pertinent to the particular problem with which the inventors are involved. Therefore, the Potier reference is not prior art with respect to the claimed invention and accordingly should not be applied in the context of the section 103 rejection advanced by the examiner.

Although GB762 utilizes graphite particles, there is no suggestion of employing "expandable" graphite, nor that the graphite particles expand when heated. GB'762 teaches that the graphite particles are added to the fuel oil, pass through the fuel system and burners into the combustion chamber, and form un-burnt carbon in the gaseous media, which enters and passes on through the turbine. The fuel oil ash will tend to stick to the graphite particles and be carried out through the exhaust, and any deposits of ash that may have been built up may be eroded away by the impact of the graphite particles.

Expandable graphite particles differ from natural graphite particles in that the graphite is treated chemically to provide the ability to expand up to 200 times their initial volume when heated above a predetermined temperature. This feature provides significant advantages over natural graphite particles. For example, a small amount of one-micron sized expandable graphite particles in applicants' cleaning composition will allow the graphite to pass filters and other equipment while in its unexpanded state, to provide lubricity, corrosion protection, heat transfer protection, etc., and once it is passed into the flame, it instantaneously expands in volume to up to 200 microns. When the particles expand up to 200 times their initial volume, they are significantly more effective in cleaning the hot gas path of the turbine and attendant downstream heat recovery equipment, if present, than natural graphite particles. Even after expansion, the expandable graphite particles retain the desirable properties of lubricity, corrosion protection, heat transfer protection, etc.

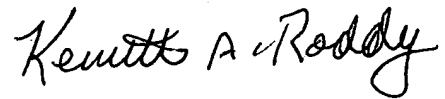
Merely because expandable graphite is known, it does not necessarily follow that it would be obvious to employ it in the recited turbine cleaning composition and for the purpose claimed by applicants. The advantages of such a modification may seem obvious, but only in hindsight after having read applicant's disclosure, and not from the teachings gleaned from the GB'762 and Potier references alone.

Applicants' were the first to recognize the advantage of combining expandable graphite into a cleaning composition and utilizing it to clean gas turbines. The GB'762 reference has been in existence for thirty-five years, and if the use of expanded graphite particles in a turbine cleaning composition and method were in fact obvious, because of its advantages, those skilled in the art would have surely implemented it by now. The fact that those skilled in the art have not implemented it, despite its great advantages, indicates that it is not obvious.

Accordingly, in view of the foregoing amendments, explanations and remarks it is respectfully requested that claims 1, 3, 9 and 10-13, as amended, be reconsidered and allowed.

Claims 14-19 were withdrawn as being directed toward a non-elected species. It is submitted that amended base claims 1 and 3 are generic to claims 14-19, which are species of the contacting step recited in the base claims. Accordingly, it is respectfully requested that the requirement regarding the election of species be withdrawn, and that claims 14-19 be rejoined and considered for prosecution on the merits.

Respectfully submitted,

A handwritten signature in black ink that reads "Kenneth A. Roddy". The signature is written in a cursive, flowing style.

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